

WHAT IS CLAIMED IS:

1. An ice and snow melting heater control assembly, comprising:
at least one sensor;
at least one heater element; and
a controller communicatively coupled with at least one said sensor and at least one said
5 heater element, said controller directing status information about at least one said sensor to at
least one said heater element.
2. The assembly of claim 1, wherein said status information includes at least one of
temperature, moisture detection, controller status and historical operating conditions.
3. The assembly of claim 1, further comprising at least one conductor electrically
connected to said heater element, said at least one conductor carrying electrical power to said
heater element, said electrical power controlled by said controller.
4. The assembly of claim 3, wherein said status information is observed by measuring
current variations through at least one said conductor.
5. The assembly of claim 1, wherein said controller creates a pattern to convey said
status information to said heater circuit.
6. The assembly of claim 5, wherein said pattern lasts less than a predetermined time.

7. The assembly of claim 6, wherein said predetermined time is thirty seconds.

8. The assembly of claim 1, wherein said at least one sensor includes at least one moisture sensor, said moisture sensor being periodically energized by said controller.

9. The assembly of claim 8, wherein said at least one sensor is a plurality of sensors including a temperature sensor, said moisture sensor remaining unenergized if a temperature detected by said temperature sensor is above a predetermined temperature.

10. The assembly of claim 9, wherein said predetermined temperature is approximately 38 degrees Fahrenheit.

11. A heater control assembly, comprising:

a heater circuit; and

a controller communicatively coupled to said heater circuit, said controller directing status information of the control assembly to said heater circuit.

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12. The assembly of claim 11, wherein said heater circuit includes at least one heating element and at least one conductor connecting said controller to at least one said heating element.

13. The assembly of claim 12, wherein said status information is observed by measuring current variations through at least one said conductor.

14. The assembly of claim 11, wherein said controller creates a pattern to convey said status information to said heater circuit.

15. The assembly of claim 14, wherein said pattern lasts less than thirty seconds.

16. A method of conveying operational status of an ice and snow melting heater control system, comprising:

detecting an event by the heater control system;

obtaining information about the operational status of said heater control system; and

5 sending data on an electrical power conductor to a heater element based on said information.

17. The method of claim 16, wherein said event is at least one of upon power being applied and manual initiation.

18. The method of claim 16, wherein said information includes at least one of electrical power being applied, temperature, moisture detection, controller status and historical operating conditions.

19. The method of claim 16, wherein said sending step includes the substep of pulsing electrical power to said electrical power conductor in an on and off pattern, said pattern dependant upon said information.

20. The method of claim 19, wherein said pulsing step includes varying at least one of time duration and frequency of said pattern.

21. The method of claim 19, wherein said event is upon power being applied, and said information includes at least one of electrical power being applied, temperature, moisture detection, controller status and historical operating conditions.

22. The method of claim 21, further comprising the step of detecting said pattern in a conductor by way of an ampere meter.

23. The method of claim 19, wherein said pattern is completed within thirty seconds of said event.